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REMARKS

The Advisory Action of February 9, 2006 was received and carefully reviewed. The Examiner is thanked for reviewing this application

Claims 2-25 are pending prior to the instant amendment, of which claims 2, 5, 9, 12, 16 and 19 are independent. By this Preliminary Amendment, Applicants add herein new claims 26-31 in order to recite that sputtering is performed by using a target comprising silicon nitride. As a result, claims 2-31 are currently pending.

Claims 2-3, 6, 9-10, 12-13, 15-17 and 19-20 remain rejected under 35 U.S.C. 103(a) as unpatentable over Cunningham et al. (U.S. Patent No. 3,833,842 - hereinafter Cunningham) and in view of Mori et al. (U.S. Patent No. 5,243,202 - hereafter Mori). Further, claims 4, 7, 11, 14, 18 and 21 stand rejected under 35 U.S.C. §103(a) as unpatentable over Cunningham and Mori, and further in view of Nomoto et al. (U.S. Patent No. 5,225,364 - hereinafter Nomoto). Still further, claims 5, 8, 15 and 22 stand rejected under 35 U.S.C. §103(a) as unpatentable over Cunningham and further in view of Yamazaki et al. (U.S. Patent No. 6,586,346 - hereafter Yamazaki). Applicants continue to traverse these rejections at least for the reasons advanced in the Request for Reconsideration filed January 20, 2006, and for the additional reasons advanced below.

As previously noted, there is still no detailed rejection of dependent claims 23-25. Hence, Applicants will not address these claims and respectfully request the Examiner to clarify the status of claims 23-25 and give Applicant an opportunity to respond, if necessary.

Further, Applicant respectfully request that the Examiner address Applicants' arguments since the prior art rejections in the Office Action mailed October 28, 2005 are verbatim of the prior art rejections in the Office Action mailed May 18, 2005. The Examiner does not appear to have considered Applicant's argument that the Examiner's rejection is based on an unclaimed feature in specificity.

As submitted in the Request for Reconsideration filed August 17, 2005, the Examiner stated, "Mori, in fig. 7, discloses an analogous semiconductor device including the silicon nitride comprising nitrogen at 75% volume or more in order to have a film that has high break down voltage (col. 30, lines 5-25.)". In contrast with Mori, Applicant's claimed invention is characterized by forming an insulating film comprising silicon nitride over a

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semiconductor by sputtering in an atmosphere comprising nitrogen at 75 volume % or more. Clearly, the disclosed feature of Mori is different from Applicant's claimed feature, and, thus, is not sufficient to suggest a combination with Cunningham to reach the claimed invention.

Still further, as submitted previously, Mori teaches a CVD method, as disclosed in, e.g. Col. 26, lines 14-15, wherein it is stated "A silicon-based thin film according to the present invention is formed by using a plasma CVD apparatus". On the other hand, the presently claimed invention is directed to a sputtering method, and there is no suggestion or motivation to combine the sputtering method of Cunningham with the CVD method of Mori to arrive at Applicant's claimed invention.

In response to Applicant's arguments, on page 4 of the Office Action, the Examiner asserts that unobviousness cannot be established by attacking references individually when rejection is based on combination of references. It is respectfully submitted that, however, that a *prima facie* case of obviousness requires that "the prior art reference (or references when combined) must teach or suggest all the claim limitations." See MPEP § 2142.

In this case, Applicants are not individually attacking the references, as suggested by the Examiner, but instead are pointing to specific disclosure in each of the references to support the argument that there is no suggestion to combine them. This is an essential exercise for all obviousness type rejections under Section 103.

With respect to the Examiner's repeated identical reasoning for the rejections, Applicant respectfully reiterates that Mori is directed to a plasma CVD method. Further, col. 3, Lines 9-24 of Mori discusses plasma CVD as follows:

This plasma CVD method is a method of supplying a process gas to a chamber in which a substrate heated to a predetermined temperature is set, causing a high-frequency glow discharge (RF discharge) upon supply of an RF current so as to set the process gas in a plasma state while the pressure of the process gas is controlled to a predetermined value, and depositing a silicon compound on the substrate, thereby forming a silicon based thin film. The process gas consists of a main reaction gas serving as a source gas for a film to be formed and a carrier gas for diluting the main reaction gas to obtain the plasma state. In order to form the SiN film, monosilane (SiH₄) gas and ammonia (NH₃) gas constitute a main reaction gas, and nitrogen (N₂) gas is used as a carrier gas. [emphasis added]

On the other hand, Cunningham teaches forming a silicon nitride film by a sputtering method in an atmosphere containing nitrogen. However, the sputtering method is performed by using a target (e.g. silicon, silicon nitride) and a reaction gas (e.g. nitrogen gas, halogen gas). By the sputtering method, a material of the target reacts to the process gas, and then a

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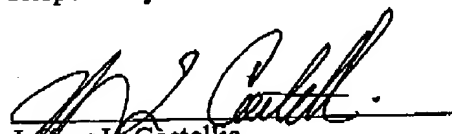
silicon nitrogen film is deposited. Thus, the sputtering method is completely different from the plasma CVD method.

In addition, although Cunningham appears to disclose forming a silicon nitride film by sputtering in an atmosphere containing nitrogen, no material of a target nor a combination of the target with a process gas are taught or suggested. Consequently, claims 2-31, particularly new claims 26-31, should be considered allowable.

Continued examination on the merits is respectfully requested.

If a conference would expedite prosecution of the instant application, the Examiner is hereby invited to telephone the undersigned to arrange such a conference.

Respectfully submitted,



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